# Physiogenex
## THE METABOLIC DISEASES EXPERTS

# Evaluation of nutraceuticals in the diet-induced obese (DIO) mouse model

✓ A widely accepted model of diet-induced metabolic diseases to quickly evaluate the efficacy of your nutraceuticals on weight loss, glucose tolerance, insulin sensitivity and fatty liver

### Key benefits

✓ _Get a complete and rapid evaluation of the efficacy of your nutraceutical_ on food intake, weight loss and visceral adiposity, insulin sensitivity and glucose tolerance and fatty liver in this mouse model of diet-induced obesity and insulin resistance

## MODEL FEATURES

- **Background strain:** C57BL/6J mouse, male
- **Diet:** 60% high fat diet, ref# D12492 from Research Diets
- **In life study duration:** depends on treatment duration (preventive: 12 weeks diet – curative: ready-to-use, no diet period)
- **Positive nutraceutical controls:** green tea and green coffee
- **Positive drug controls:** metformin, pioglitazone, liraglutide

## BODY WEIGHT & FOOD INTAKE

### GREEN COFFEE BETTER REDUCES BODY WEIGHT AND FAT MASS THAN GREEN TEA, INDEPENDENTLY OF FOOD INTAKE IN DIO MICE
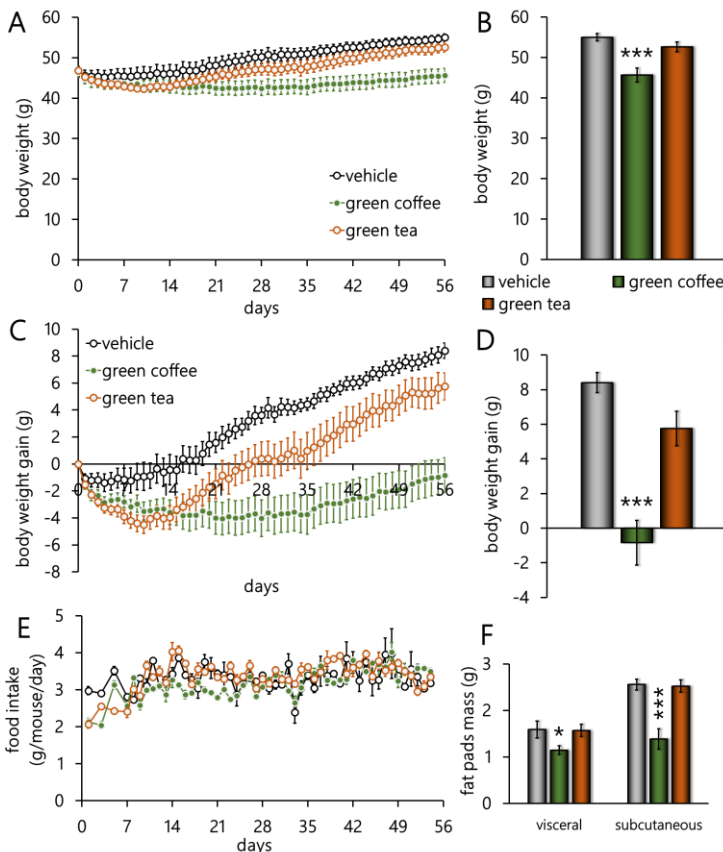


Body weight and body weight gain during (A, C) and after 8 weeks of treatment (B, D), food intake during treatment (E), visceral (epididymal) and subcutaneous (inguinal) fat pad mass (F) in DIO mice treated with vehicle, green coffee or green tea
*p<0.05 and ***p<0.01 vs. vehicle

## GLUCOSE TOLERANCE AND INSULIN RESISTANCE

### GREEN COFFEE AND GREEN TEA BOTH IMPROVE GLUCOSE INTOLERANCE AND INSULIN RESISTANCE IN DIO MICE
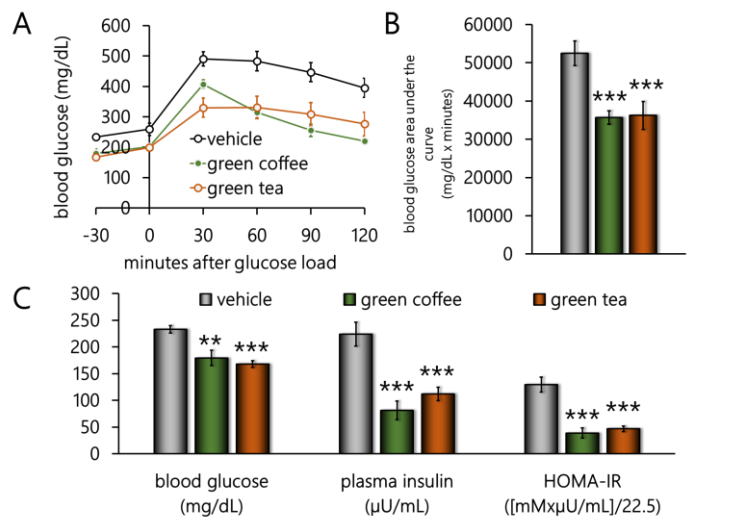


Blood glucose levels (A) and area under the curve (B) during an intraperitoneal glucose tolerance test after 8 weeks of treatment. Fasting blood glucose, plasma insulin and HOMA-IR index of insulin resistance at time -30 minutes before intraperitoneal glucose load (C). **p<0.01 and ***p<0.001 vs. vehicle

## NON ALCOHOLIC FATTY LIVER

### GREEN COFFEE, BUT NOT GREEN TEA, REDUCES PLASMA ALT, LIVER MASS, AND HEPATIC STEATOSIS IN DIO MICE
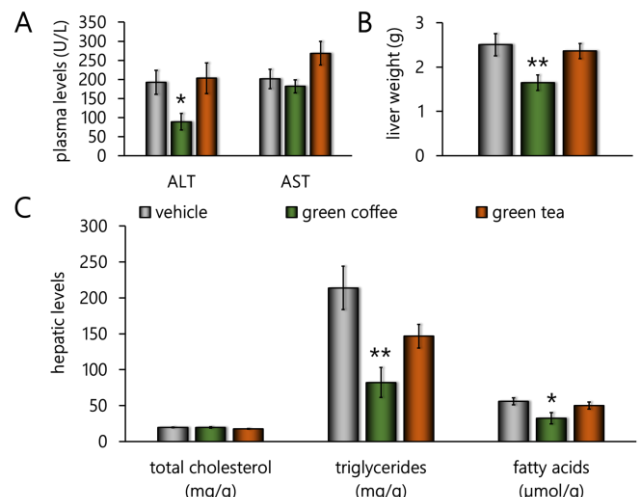


Plasma transaminases (A), liver weight (B) and hepatic lipids levels (C) after 8 weeks of treatment.
*p<0.05 and ***p<0.001 vs. vehicle